

REMARKS/ARGUMENTS

The Office Action dated July 23, 2009 has been carefully reviewed. Reconsideration of the objections and rejections contained therein is respectfully requested in view of the following remarks. Claims 1-31 and 37-42 are pending in the current application. Claims 1, 7, 14, 19, 25, 32 and 37-41 are independent claims. Claims 32-36 have been withdrawn.

Reply to Examiner's Response to Arguments

Since the Examiner has maintained the prior rejections and has provided arguments in support of this position, Applicant will address the Examiner's response first.

The Examiner's position as articulated in the Response to Argument's section on Page 2 of the 7/23/2009 Final Office Action is that Joshi was cited merely to teach the allocation/assignment of a second channel to a single mobile station, which is not taught by Lindskog. Therefore, the Examiner indicates that Applicant's arguments presented in the 5/7/2009 Amendment that argue that Joshi's secondary or supplemental channels are each capable of full-data rates as high as its dedicated channel are not persuasive because the claim language affected by this argument is taught by Lindskog. Applicant respectfully disagrees.

On page 4 of the 7/23/2009 Final Office Action, the Examiner admits that Lindskog includes no teaching at all related to "assigning a second channel to a mobile station". The Examiner cites to Joshi for disclosing this limitation. If all Applicant were claiming was a channel allocated to a mobile station, the Examiner's position might actually be persuasive. However, the claims are not this broad.

Claim 1, for example, recites "assigning a first sub-code derived from the first code to support a dedicated channel to the first subscriber station", and "assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station,

wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code". Accordingly, claim 1 requires not only that a supplemental channel be allocated to the second subscriber station, but that the supplemental channel be supported by "a second sub-code" that is "restricted to lower data-rate transmissions as compared to the first code".

In the 5/7/2009 Amendment, Applicant showed how the SCCHs $S_0 \dots S_6$ clearly had the same data-rate capacity as the FCCH (e.g., see [0033]-[0034] and/or [0036]-[0037] of Joshi). In particular, the SCCHs are capable of a full data rate whenever data is to be sent, which means that the SCCHs each have a full Walsh code (i.e., not a sub-code) (e.g., see [0031] of Joshi). Lindskog admittedly discloses nothing related to secondary channel allocations to mobile stations. Accordingly, it is unclear how the Examiner could allege that the specific claimed manner of allocating the "supplemental channel" is obvious given that Lindskog discloses nothing with respect to supplemental channel allocation to the same subscriber station, and the SCCHs in Joshi are implemented in a different manner as claimed; namely, with each having a full data-rate capacity.

The Examiner's position appears to be that the sub-codes in the tree-structure of FIG. 2 of Lindskog would be used for the supplemental channel allocation. However, this is certainly not an inherent feature, as a different Walsh code altogether could be used if Lindskog were to allocate another channel to the same mobile station (i.e., from a different tree). Further, Joshi teaches away from using a sub-code that has a lower data rate than its parent code as claimed, because the SCCHs are each capable of the same full data rates as the FCCH, which means a sub-code restricted to a lower-rate than the FCCH could not be used to support the SCCHs.

Further, claim 42 clarifies that the second subscriber station is allocated a dedicated channel with a Walsh code having a length equal to a Walsh code from which the parent-code of

the first and second sub-codes are derived. As will be appreciated, this means that the dedicated channel of the second subscriber station is capable of higher transmission rates than the supplemental channel of the second subscriber station. This is clearly taught away from in Joshi, which indicates that the SCCHs are each capable of the full data-rate, as is the FCCH. Lindskog's mere teaching of a code tree hierarchy is insufficient to provide a rationale for modifying Joshi's teaching that the SCCHs would have access to the full data-rates, implying that a full code would be allocated to the SCCHs.

Further, claim 29 recites "wherein the processor is further configured to receive information indicating whether each of the subscriber stations are in soft handoff, and separate the subscriber stations by placing the subscriber stations in soft handoff in the first group and the subscriber stations that are not in soft handoff in the second group". With respect to the "first group", independent claim 25 recites that each subscriber station in the first group is allocated "a different first code from a plurality of orthogonal codes to each of the subscriber stations in the first group, assign each of the subscriber stations in the first group either its allocated first code or a first sub-code derived from its allocated first code, to support a dedicated channel", and then any remaining or un-allocated sub-codes from the first codes to the "second group". In other words, subscriber stations in soft handoff are first allocated code-space, with any leftover or remaining code-space (e.g., Walsh codes) being allocated to subscriber stations that are not in soft-handoff. For example, Paragraph [0035] of the Specification states "[o]nce the Walsh code assignments have been made to those subscriber stations in soft handoff, the leftover Walsh code space may be opportunistically assigned to the remaining subscriber stations". The Examiner's comments related to claim 29 do not appear to appreciate that the handoff-status of the subscriber stations affects their respective code allocations in the manner described above. The Examiner simply states that

... it is obvious to one of ordinary skill in the art that in a communication system any time there can be a mobile station in soft hand off and one in not soft handoff. There can also be none in soft handoff. The allocation of a code to a mobile in soft-handoff would only constitute holding the resource in the first cell for additional time. (Para 65)

(e.g., see Page 10 of the Office Action)

The above-excerpt simply represents well-known information related to soft-handoffs in a wireless system, but does not actually address the claim language that indicates that the code-allocations to subscriber stations is based on their handoff status, specifically such that mobiles in soft handoff are allocated either a full-rate code or sub-code, while mobiles not in soft hand-off are allocated sub-codes corresponding to un-used portions from the code allocations to the soft-handoff mobiles.

For all of the above reasons, withdrawal of this rejection is respectfully requested.

SUMMARY

Since the Examiner has maintained his rejection of claims 1-31 and 37-42 under 35 U.S.C. § 103 as noted above, Applicant once again traverses these rejections. Applicant expressly maintains the reasons from the prior responses to clearly indicate on the record that Applicant has not conceded any of the previous positions relative to the maintained rejections. For brevity, Applicant expressly incorporates the prior arguments presented in the 5/7/2009 response without a literal rendition of those arguments in this response.

For at least the foregoing reasons and the reasons set forth in Applicant's response of 5/7/2009, it is respectfully submitted that claims 1, 7, 14, 19, 25, 32 and 37-41 are distinguishable over the applied art. The remaining dependent claims are allowable at least by virtue of their dependency on the above-identified independent claims. See MPEP § 2143.01. Moreover, these claims recite additional subject matter, which is not suggested by the documents taken either alone or in combination.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, at the telephone number listed below.

Deposit Account Authorization

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated: 10/27/09

By: 

D. Scott Juneau, Reg. No. 39,243
Phone 858-658-2491

QUALCOMM Incorporated
Attn: Patent Department
5775 Morehouse Drive
San Diego, California 92121-1714
Telephone: (858) 658-5787
Facsimile: (858) 658-2502